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PATENT COOPERATION TREATY

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From the INTERNATIONAL SEARCHING AUTHORITY

TELECOM ITALIA LAB S.P.A. IPR Management Attn. Casuccio, Carlo Via Reiss Romoli, 274 I-10148 Torino **ITALY**

NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL SEARCH REPORT OR THE DECLARATION

(PCT Rule 44.1)

Date of mailing (day/month/year)

29/04/2003

Applicant's or agent's file reference

798/WO/CA

FOR FURTHER ACTION

See paragraphs 1 and 4 below

International application No.

PCT/IT 02/00430

International filing date (day/month/year)

01/07/2002

Applicant

TELECOM ITALIA LAB S.P.A.

| 1. | X | The applicant is hereby notified that the International Search Report has been established and is transmitted | | | | | | |
|--|-------|---|--|--|--|--|--|--|
| | | Filing of amendments and statement under Article 19: | | | | | | |
| | | The applicant is entitled. If he so wishes, to amend the claims of the International Application (see Rule 46): | | | | | | |
| | | | | , | | | | |
| When? The time limit for filing such amendments is normally 2 months from the date of transm | | | | or filing such amondments is normally 2 months from the date of transmittal of the | | | | |
| ٧ | | When? The time limit for filling such amendments is normally 2 months from the date of transmittal of the International Search Report; however, for more details, see the notes on the accompanying sheet. | | | | | | |
| international Search Heport; nowever, for more details, see the notes on the acco | | | | arch nepult, however, for more details, see the notes on the accompanying sheet. | | | | |
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| | | where? L | Arectly to the | International Bureau of WIPO | | | | |
| | | | | 34, chemin des Colombettes | | | | |
| | | | | 1211 Geneva 20, Switzerland | | | | |
| | | | | Fascimile No.: (41-22) 740.14.35 | | | | |
| | | Form Add to the second of the | | | | | | |
| | | For more detailed instructions, see the notes on the accompanying sheet. | | | | | | |
| | | | | | | | | |
| 2. | | The applica | ant is hereby n | otified that no International Search Report will be established and that the declaration under | | | | |
| | لـــا | Article 17(2)(a) to that effect is transmitted herewith. | | | | | | |
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| _ | | M:M: | | and analysis are marked (an) and the analysis of the second and th | | | | |
| 3. | | With regard to the protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that: | | | | | | |
| | | - then | ratest tagether | with the decision thereon has been transmitted to the International Bureau together with the | | | | |
| | | | | to forward the texts of both the protest and the decision thereon to the designated Offices. | | | | |
| | | - applic | caill a request | to lorward the texts of both the protest and the decision thereon to the designated Offices. | | | | |
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| | | no de | ecision has bee | en made yet on the protest; the applicant will be notified as soon as a decision is made. | | | | |
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| 4. Further action(s): The applicant is remi | | | в): ine appii | cant is reminded of the following: | | | | |
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| | | rtly after 18 months from the priority date, the international application will be published by the International Bureau. | | | | | | |
| | | | id or postpone publication, a notice of withdrawal of the international application, or of the | | | | | |
| priority claim, must reach the International Bureau as provided in Rules 90bis.1 and 90bis.3, respectively, before the | | | | | | | | |

Within 19 months from the priority date, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until 30 months from the priority date (in some Offices even later). Within 20 months from the priority date, the applicant must perform the prescribed acts for entry into the national phase before all designated Offices which have not been elected in the demand or in a later election within 19 months from the

Name and mailing address of the International Searching Authority

European Patent Office, P.B. 5818 Patentlaan 2

completion of the technical preparations for international publication.

priority date or could not be elected because they are not bound by Chapter II.

Tatjana Nebesky

Authorized officer

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NOTES TO FORM PCT/ISA/220

These Notes are intended to give the basic instructions concerning the filing of amendments under article 19. The Notes are based on the requirements of the Patent Cooperation Treaty, the Regulations and the Administrative Instructions under that Treaty. In case of discrepancy between these Notes and those requirements, the latter are applicable. For more detailed information, see also the PCT Applicant's Guide, a publication of WIPO.

In these Notes, "Article", "Rule", and "Section" refer to the provisions of the PCT, the PCT Regulations and the PCT Administrative Instructions respectively.

INSTRUCTIONS CONCERNING AMENDMENTS UNDER ARTICLE 19

The applicant has, after having received the international search report, one opportunity to amend the claims of the international application. It should however be emphasized that, since all parts of the international application (claims, description and drawings) may be amended during the international preliminary examination procedure, there is usually no need to file amendments of the claims under Article 19 except where, e.g. the applicant wants the latter to be published for the purposes of provisional protection or has another reason for amending the claims before international publication. Furthermore, it should be emphasized that provisional protection is available in some States only.

What parts of the international application may be amended?

Under Article 19, only the claims may be amended.

During the international phase, the claims may also be amended (or further amended) under Article 34 before the International Preliminary Examining Authority. The description and drawings may only be amended under Article 34 before the International Examining Authority.

Upon entry into the national phase, all parts of the international application may be amended under Article 28 or, where applicable, Article 41.

When?

Within 2 months from the date of transmittal of the international search report or 16 months from the priority date, whichever time limit expires later. It should be noted, however, that the amendments will be considered as having been received on time if they are received by the International Bureau after the expiration of the applicable time limit but before the completion of the technical preparations for international publication (Rule 46.1).

Where not to file the amendments?

The amendments may only be filed with the International Bureau and not with the receiving Office or the International Searching Authority (Rule 46.2).

Where a demand for international preliminary examination has been its filed, see below.

How?

Either by cancelling one or more entire claims, by adding one or more new claims or by amending the text of one or more of the claims as filed.

A replacement sheet must be submitted for each sheet of the claims which, on account of an amendment or amendments, differs from the sheet originally filed.

All the claims appearing on a replacement sheet must be numbered in Arabic numerals. Where a claim is cancelled, no renumbering of the other claims is required. In all cases where claims are renumbered, they must be renumbered consecutively (Administrative Instructions, Section 205(b)).

The amendments must be made in the language in which the international application is to be published.

What documents must/may accompany the amendments?

Letter (Section 205(b)):

The amendments must be submitted with a letter.

The letter will not be published with the international application and the amended claims. It should not be confused with the "Statement under Article 19(1)" (see below, under "Statement under Article 19(1)").

The letter must be in English or French, at the choice of the applicant. However, if the language of the international application is English, the letter must be in English; if the language of the international application is French, the letter must be in French.

Notes to Form PCT/ISA/220 (first sheet) (January 1994)

NOTES TO FORM PCT/ISA/220 (continued)

The letter must indicate the differences between the claims as filed and the claims as amended. It must, in particular, indicate, in connection with each claim appearing in the international application (it being understood that identical indications concerning several claims may be grouped), whether

- (i) the claim is unchanged:
- (ii) the claim is cancelled;
- (iii) the claim is new;
- (iv) the claim replaces one or more claims as filed;
- (v) the claim is the result of the division of a claim as filed.

The following examples illustrate the manner in which amendments must be explained in the accompanying letter:

- [Where originally there were 48 claims and after amendment of some claims there are 51]:
 "Claims 1 to 29, 31, 32, 34, 35, 37 to 48 replaced by amended claims bearing the same numbers;
 olaims 30, 33 and 36 unchanged; new claims 49 to 51 added."
- [Where originally there were 15 claims and after amendment of all claims there are 11]: "Claims 1 to 15 replaced by amended claims 1 to 11."
- [Where originally there were 14 claims and the amendments consist in cancelling some claims and in adding new claims]:
 - *Claims 1 to 6 and 14 unchanged; claims 7 to 13 cancelled; new claims 15, 16 and 17 added.* or *Claims 7 to 13 cancelled; new claims 15, 16 and 17 added; all other claims unchanged.*
- 4. [Where various kinds of amendments are made]: "Claims 1-10 unchanged; claims 11 to 13, 18 and 19 cancelled; claims 14, 15 and 16 replaced by amended claim 14; claim 17 subdivided into amended claims 15, 16 and 17; new claims 20 and 21 added."

"Statement under article 19(1)" (Rule 46.4)

The amendments may be accompanied by a statement explaining the amendments and indicating any impact that such amendments might have on the description and the drawings (which cannot be amended under Article 19(1)).

The statement will be published with the international application and the amended claims.

It must be in the language in which the international appplication is to be published.

It must be brief, not exceeding 500 words if in English or if translated into English.

It should not be confused with and does not replace the latter indicating the differences between the claims as filed and as amended. It must be filed on a separate sheet and must be identified as such by a heading, preferably by using the words "Statement under Article 19(1)."

It may not contain any disparaging comments on the international search report or the relevance of citations contained in that report. Reference to citations, relevant to a given claim, contained in the international search report may be made only in connection with an amendment of that claim.

Consequence if a demand for international preliminary examination has already been filed

If, at the time of filing any amendments under Article 19, a demand for international preliminary examination has already been submitted, the applicant must preferably, at the same time of filing the amendments with the International Bureau, also file a copy of such amendments with the International Preliminary Examining Authority (see Rule 62.2(a), first sentence).

Consequence with regard to translation of the international application for entry into the national phase

The applicant's attention is drawn to the fact that, where upon entry into the national phase, a translation of the claims as amended under Article 19 may have to be furnished to the designated/elected Offices, instead of, or in addition to, the translation of the claims as filed.

For further details on the requirements of each designated/elected Office, see Volume II of the PCT Applicant's Guide.

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

| Applicant's or agent's file reference 798/W0/CA | FOR FURTHER see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below. | | | |
|---|---|---|--|--|
| International application No. | International filing date (day/month/year) | (Earliest) Priority Date (day/month/year) | | |
| PCT/IT 02/00430 | 01/07/2002 | 12/04/2002 | | |
| Applicant | | | | |
| TELECOM ITALIA LAB S.P.A | | | | |
| This International Search Report has be according to Article 18. A copy is being to | en prepared by this International Searching Autransmitted to the International Bureau. | thority and is transmitted to the applicant | | |
| This International Search Report consist IX It is also accompanied b | s of a total of sheets. y a copy of each prior art document cited in this | s report. | | |
| 1. Basis of the report | | | | |
| | e international search was carried out on the ba niess otherwise indicated under this item. | isis of the international application in the | | |
| the international search Authority (Rule 23.1(b)). | was carried out on the basis of a translation of | the international application furnished to this | | |
| | ind/or amino acid sequence disclosed in the i | nternational application, the International search | | |
| | ional application in written form. | | | |
| filed together with the in | ternational application in computer readable for | m. | | |
| furnished subsequently | to this Authority in written form. | | | |
| furnished subsequently | to this Authority in computer readble form. | | | |
| | ubsequently furnished written sequence listing of as filed has been furnished. | does not go beyond the disclosure in the | | |
| the statement that the in furnished | formation recorded in computer readable form | Is identical to the written sequence listing has been | | |
| 2. Certain claims were fo | und unsearchable (See Box I). | | | |
| 3. Unity of invention is la | cking (see Box II). | | | |
| 4. With regard to the title, | | | | |
| the text is approved as s | submitted by the applicant. | | | |
| | ished by this Authority to read as follows: | 1. | | |
| SCHEDULING A SHARED R | ESOURCE AMONG SYNCHRONOUS AN | nd asynchronous packet flows | | |
| 5. With regard to the abstract, | | | | |
| . 190 | submitted by the applicant. | | | |
| the text has been estable | ished, according to Rule 38.2(b), by this Author ne date of mailing of this international search re | | | |
| 6. The figure of the drawings to be put | blished with the abstract is Figure No. | 1 | | |
| as suggested by the app | olicant. | None of the figures. | | |
| because the applicant ta | illed to suggest a figure. | | | |
| because this figure bette | er characterizes the invention. | | | |

INTERNATIONAL SEARCH REPORT

International Application No PCT/IT 02/00430

CLASSIFICATION OF SUBJECT MATTER C 7 H04L12/64 H04L H04L12/56 According to International Patent Classification (IPC) or to both national classification and IPC **B. FIELDS SEARCHED** Minimum documentation searched (classification system followed by classification symbols) IPC 7 HO4L Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal C. DOCUMENTS CONSIDERED TO BE RELEVANT Category ' Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. HAN C-C ET AL: "A POLYNOMIAL-TIME OPTIMAL Υ 1,14 SYNCHRONOUS BANDWIDTH ALLOCATION SCHEME FOR THE TIMED-TOKEN MAC PROTOCOL"
PROCEEDINGS OF INFOCOM '95 - CONFERENCE ON COMPUTER COMMUNICATIONS. FOURTEENTH ANNUAL JOINT CONFERENCE OF THE IEEE COMPUTER AND COMMUNICATIONS SOCIETIES, BOSTON APR. 2 -6, 1995, LOS ALAMITOS, IEEE COMP. SOC. PRESS, US vol. 2 CONF. 14 2 April 1995 (1995-04-02), pages 875-882, XP000580660 ISBN: 0-7803-2524-9 A page 875, left-hand column, line 28 2-13. -right-hand column, line 30 15 - 26page 876, left-hand column, line 46 -page 877, right-hand column, line 26 Further documents are listed in the continuation of box C. Patent family members are listed in annex. Special categories of cited documents: "T" later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the "A" document defining the general state of the art which is not considered to be of particular relevance invention "E" earlier document but published on or after the international "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone filing date document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "O' document referring to an oral disclosure, use, exhibition or other means document published prior to the international filing date but later than the priority date claimed "&" document member of the same patent family Date of the actual completion of the international search Date of mailing of the international search report 14 April 2003 29/04/2003 Name and mailing address of the ISA Authorized officer European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016 Lastoria, G

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/IT 02/00430

| .(Continu | ation) DOCUMENTS CONSIDERED TO BE RELEVANT | |
|------------|---|-----------------------|
| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
| Y | GENTER W L ET AL: "Delay analysis of the FDDI synchronous data class" MULTIPLE FACETS OF INTEGRATION. SAN FRANCISCO, JUNE 3 - 7, 1990, PROCEEDINGS OF THE ANNUAL JOINT CONFERENCE OF THE COMPUTER AND COMMUNICATIONS SOCIETIES (INFOCOM), WASHINGTON, IEEE COMP. SOC. PRESS, US, vol. 2 CONF. 9, 3 June 1990 (1990-06-03), pages 766-773, XP010019457 ISBN: 0-8186-2049-8 | 1,14 |
| A | abstract page 766, left-hand column, line 1 -page 767, right-hand column, line 68; figure 1 | 1-13, 15-26 |
| A . | US 5 404 424 A (ZHAO WEI ET AL) 4 April 1995 (1995-04-04) column 4, line 6 -column 6, line 15 column 10, line 21 - line 34 | 1-26 |
| A | SAHA D ET AL: "Carry-over round robin: a simple cell scheduling mechanism for ATM networks" PROCEEDINGS OF IEEE INFOCOM 1996. CONFERENCE ON COMPUTER COMMUNICATIONS. FIFTEENTH ANNUAL JOINT CONFERENCE OF THE IEEE COMPUTER AND COMMUNICATIONS SOCIETIES. NETWORKING THE NEXT GENERATION. SAN FRANCISCO, MAR. 24 - 28, 1996, PROCEEDINGS OF INFOCOM, L, vol. 2 CONF. 15, 24 March 1996 (1996-03-24), pages 630-637, XP010158124 ISBN: 0-8186-7293-5 page 632, right-hand column, line 1 -page 633, right-hand column, line 34 | 1-26 |
| | CHAN E ET AL: "ON THE EFFECTIVENESS OF THE FDDI-M MEDIUM ACCESS PROTOCOL FOR REAL-TIME TRAFFIC" JOURNAL OF SUPERCOMPUTING, KLUWER ACADEMIC PUBLISHERS, DORDRECHT, NL, vol. 11, no. 4, 1997, pages 371-389, XP000724664 ISSN: 0920-8542 page 371, line 5 -page 372, line 40 page 375, line 10 -page 377, line 11 | 1-26 |
| , A | WO 02 35777 A (MINGOZZI ENZO ;STEA GIOVANNI (IT); LENZINI LUCIANO (IT); SCARRONE) 2 May 2002 (2002-05-02) the whole document | 1-26 |

3

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No PCT/IT 02/00430

| Patent document cited in search report | | Publication date | | Patent family member(s) | Publication date |
|--|---|---------------------|----------------|--|--|
| US 5404424 | Α | 04-04-1995 | NONE | - | |
| WO 0235777 | Α | 02-05-2002 | IT AU WO | T020001000 A1 1519502 A 0235777 A1 | 23-04-2002 06-05-2002 02-05-2002 |

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